

ALUMINUM COMPANY OF AMERICA (ALCOA)

(Riverdale, Iowa)

GENERAL DESCRIPTION

The ALCOA site is located in Sections 23, 24, 25, and 26 of Township 78N, Range 4E, Scott County, Iowa. The site occupies 445 acres adjacent to the Mississippi River Pool #15 (MRP15). The Aluminum Company of America is the owner of record. The site was entered on the Registry in November 1990.

SITE CLASSIFICATION

The site is classified “d” closed requires further management.

TYPE AND QUANTITY OF HAZARDOUS WASTE

- **The primary type of hazardous waste: PCB's and tetrachloroethylene (PCE)**

The ALCOA facility produces rolled aluminum plate, sheet, and foil and used an unlined waste oil surface impoundment located approximately 150 feet from the Mississippi River for disposal of oil and grease, pickling fluids, solvents, and paint wastes. In 1979, ALCOA determined the waste oil in the impoundment was contaminated with polychlorinated biphenyls (PCBs). In 1981, ALCOA removed 2.8 million gallons of waste oil and sludge from the impoundment. Some waste was disposed off-site and the remaining sludge was solidified in place with cement kiln dust to control PCB releases. ALCOA installed groundwater-monitoring wells around the perimeter of the impoundment. The monitoring indicated improvement; however, additional action was determined to be necessary. In August 1989 ALCOA informed EPA of additional PCB problems in the soil and groundwater. In December 1989, ALCOA informed IDNR of a tetrachloroethylene (PCE) contamination of undetermined volume in the area around two PCE storage tanks.

SUMMARY OF PUBLIC HEALTH AND ENVIRONMENTAL CONCERNS

- **The primary Environmental concerns at this site are water quality of surface water (the Mississippi River), groundwater and detrimental effect on flora and fauna of the Mississippi. The primary public health concerns are possible exposure to contaminated soil, groundwater and consumption of fish containing contaminants.**

Under the terms of a 1984 Administrative Order of Consent (AOC), a cut-off trench was installed to collect groundwater containing oil from the impoundment from reaching the Mississippi River. In addition, the impoundment (with remaining stabilized sludge) was capped with a low permeability compacted clay.

From 1983 to 1987 fish tissue and river sediment studies were conducted in Mississippi River Pool 15 (MRP15). The Iowa Department of Natural Resources (IDNR) evaluated this data and issued a Fish Consumption Advisory. This advisory notified the public that certain fish in MRP15 could contain levels of PCBs above the FDA tolerance level of 5ppm. In April 1990, IDNR issued a second fish consumption advisory for carpsuckers (also referred to as white carp). The Fish Consumption Advisories recommended not eating carp and carpsuckers taken along the Iowa side of the river.

In July 1990, EPA and ALCOA signed another AOC requiring additional fish and sediment studies in MRP15 and in the outfalls from the ALCOA facility to the river. Fish sampling events were conducted in 1990, 1992, 1994, 1996 and 1998. The analytical results from all the samplings events showed declining levels of PCBs in fish from MRP15. In August of 2000 the IDNR lifted the Fish Consumption Advisories for carp and carpsuckers because PCBs in fish tissue were below the tolerance limit of 2 ppm of total PCBs.

No PCB contamination has been found in the bedrock aquifer. However, chlorinated solvents (PCE,; TCE; 1,2DCE and vinyl chloride) have been found in monitoring and process water wells at concentrations well above drinking-water standards.

SUMMARY OF ASSESSMENT, MONITORING OR REMEDIAL ACTIONS

The EPA is the lead agency for this site under the CERCLA program.

The EPA and ALCOA signed an Administrative Order on Consent in August 1995. This AOC established a process (Overview of Cleanup Strategy) by which ALCOA will evaluate and assess 81 additional areas of potential contamination and, if necessary, conduct removal actions.

In 2002 ALCOA completed a site-wide groundwater remedial investigation that concluded that the production well PW-6 is containing groundwater contamination and substantially preventing off-site migration of contaminants. PW-6 has been in continuous operation since 1989 as a recovery well for containment of groundwater contamination. Water from PW-6 is treated prior to discharge to the Mississippi River.

In 2005 the EPA issued a Record of Decision (ROD) for ground water contamination at the ALCOA property as well as for sediment and aquatic contamination of Pool #15 of the Mississippi River (MRP15). The ROD called for: continued operation of the ground water treatment system, institutional controls to prevent installation of on-site drinking water wells, and continued use of the property for industrial purposes only and monitoring of ground water, river sediment and fish (tissue).